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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/511,634

05/16/2005

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SONYJP 3.3-304

4157

530 7590 05/15/2008  
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EXAMINER

DANIEL JR, WILLIE J

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

05/15/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/511,634	<b>Applicant(s)</b> NISHIMURA ET AL.	
	<b>Examiner</b> WILLIE J. DANIEL JR	<b>Art Unit</b> 2617	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 May 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 8-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

1. This action is in response to application filed on 16 May 2005 (including amendment filed 08 June 2007). **Claims 8-31** are now pending in the present application and **claims 1-7** are cancelled. This office action is made **Non-Final**.

***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

3. The information disclosure statement (IDS) submitted on
  - a. 18 October 2004is in compliance with the provisions of 37 CFR 1.97 and is being considered by the examiner.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 8-31** are rejected under 35 U.S.C. 102(e) as being anticipated by **Walker et al.**

(hereinafter Walker) (**US 7,342,973 B2**).

Regarding **claims 8, 13, 20, and 25**, Walker discloses in a first wireless communication device, a method of carrying out wireless communication with a second wireless communication device (see Figs. 1-2, 20-22), said method comprising:

periodically determining, during communication with the second wireless communication device using a particular channel of a given one of a plurality of frequency bands as a communication channel, whether a disturbing wave is present in the communication channel (see col. 8, lines 36-44; Figs. 1-2, 10-11); and

when the disturbing wave is present in the communication channel (see col. 8, lines 36-44; Figs. 1-2),

(a) determining whether the given one of the plurality of frequency bands, includes an unused channel in which no disturbing wave is present (see col. 7, lines 45-51; Figs. 1-2, 10-11),

(b) when the given one of the plurality of frequency bands includes the unused channel in which no disturbing wave is present, determining a maximum transmission rate at which a

received field strength value exceeds a threshold value from a plurality of transmission rates associated with the given one of the plurality of frequency bands (see col. 7, lines 45-51; col. 8, lines 27-35,52-65; Figs. 1-2, 9-11),

(c) when the given one of the plurality of frequency bands does not include an unused channel or does not include an unused channel in which no disturbing wave is present or when the given one of the plurality of frequency bands includes the unused channel in which no disturbing wave is present but none of the associated plurality of transmission rates provides a received field strength value that exceeds the threshold value, substituting another one of the plurality of frequency bands for the given one of the plurality of frequency bands and then repeating steps (a) through (c) (see col. 7, lines 45-51; col. 8, lines 27-35,52-65; Figs. 1-2, 9-11), and

(d) when the maximum transmission rate is successfully determined in step (b), continuing communication with the second wireless communication device using the unused channel as the communication channel at the determined maximum transmission rate (see col. 7, lines 45-51; col. 8, lines 27-35,52-65; Figs. 1-2, 10-11, 20-22).

Regarding **claims 9, 14, and 26**, Walker discloses a method according to claim 13, further comprising: when none of the plurality of frequency bands includes an unused channel or when none of the plurality of frequency bands includes an unused channel in which no disturbing wave is present, continuing communication with the second wireless communication device for a predetermined time period using the given one of the plurality of frequency bands as the communication channel (see col. 5, lines 55-62; col. 6, lines 13-32; Fig. 1-2, 10-11).

Regarding **claims 10 and 22**, Walker discloses a method according to claim 8, wherein when none of the plurality of frequency bands includes an unused channel or when none of the plurality of frequency bands includes an unused channel in which no disturbing wave is present, said method further comprises: transmitting a message (e.g., communication) to the second wireless communication device indicating that communication cannot be carried out (see col. 8, lines 48-51; col. 9, lines 6-11; Figs. 2, 13-15), where communication cannot be maintained in which a communication of new configuration is sent to another participating device.

Regarding **claims 11, 15, 23, and 27**, Walker discloses a method according to claim 13, wherein said step of determining whether the given one of the plurality of frequency bands includes an unused channel in which no disturbing wave is present (see Figs. 1-2) includes:

determining whether the given one of the plurality of frequency bands includes a first unused channel (see col. 7, lines 45-51; col. 8, lines 27-35,52-65; Figs. 1-2, 9-11),

when the given one of the plurality of frequency bands includes the first unused channel, determining whether a disturbing wave is present in the first unused channel, when no disturbing wave is present in the first unused channel, defining the first unused channel as the unused channel in which no disturbing wave is present, and when the disturbing wave is present in the first unused channel (see col. 7, lines 45-51; col. 8, lines 27-35,52-65; Figs. 1-2, 9-11),

(i) determining whether the given one of the plurality of frequency bands includes another unused channel (see col. 7, lines 45-51; col. 8, lines 27-35,52-65; Figs. 1-2, 9-11),

(ii) when the given one of the plurality of frequency bands includes the another unused channel, determining whether a disturbing wave is present in the another unused channel (see col. 8, lines 27-35,52-65; Figs. 1-2, 9-11),

(iii) when the disturbing wave is present in the another unused channel, repeating steps (i) through (iii) using yet another unused channel in place of the another unused channel (see col. 8, lines 27-35,52-65; Figs. 1-2, 9-11), and

(iv) when no disturbing wave is present in the another unused channel, defining the another unused channel as the unused channel in which no disturbing wave is present (see col. 8, lines 27-35,52-65; Figs. 1-2, 9-11).

Regarding **claims 12, 16, 24, and 28**, Walker discloses a method according to claim 13, wherein said step of determining a maximum transmission rate at which a received field strength value exceeds the threshold value (see Fig. 2) includes:

determining whether a received field strength value at a highest one of the plurality of transmission rates transmission rate exceeds the threshold value (see col. 9, lines 55-60; col. 8, lines 52-65; Figs. 1-2),

when the highest one of the plurality of transmission rates exceeds the threshold value, designating the highest one of the plurality of transmission rates as the maximum transmission rate (see col. 8, lines 27-35,52-65; Figs. 1-2, 9-11); and

when the highest one of the plurality of transmission rates does not exceed the threshold value (see col. 8, lines 27-35,52-65; Figs. 1-2, 9-11),

(i) determining whether a next lower one of the plurality of transmission rates exceeds the threshold value (see col. 8, lines 27-35,52-65; Figs. 1-2, 9-11),

(ii) when the next lower one of the plurality of transmission rates exceeds the threshold value, designating the next lower one of the plurality of transmission rates as the maximum transmission rate (see col. 8, lines 27-35, 52-65; Figs. 1-2, 9-11),

(iii) when the next lower one of the plurality of transmission rates does not exceed the threshold value, repeating steps (i) through (iii) until either steps (i) through (iii) are carried out for a least one of the plurality of transmission rates or the next lower one of the plurality of transmission rates is a lowest acceptable transmission rate (see col. 8, lines 27-35, 52-65; Figs. 1-2, 9-11), and

(iv) when the next lower one of the plurality of transmission rates is the lowest acceptable transmission rate, setting that transmission rate as the maximum transmission rate without determining whether the received field strength value at that transmission rate exceeds the threshold value (see col. 8, lines 27-35, 52-65; Figs. 1-2, 9-11).

Regarding **claims 17 and 29**, Walker discloses a wireless communication apparatus for carrying out wireless communication with another wireless communication apparatus (see col. 7, lines 45-51; Figs. 1-2, 19-20), said apparatus comprising:

means for periodically determining, during communication with the another wireless communication apparatus at a particular one of a plurality of transmission rates associated with a given frequency band, whether the plurality of transmission rates includes at least one transmission rate that is higher than the particular transmission rate (see col. 8, lines 27-35; col. 8, line 52 - col. 9, line 5; col. 9, lines 55-61; Figs. 1-2, 9-11, 13-15);

means for, when the plurality of transmission rates includes the at least one transmission rate higher than the particular transmission rate, determining whether a received field



strength value at one of the plurality of transmission rates that is immediately higher than the particular one of a plurality of transmission rates exceeds a threshold value (see col. 8, lines 27-35; col. 8, line 52 - col. 9, line 5; col. 9, lines 55-61; Figs. 1-2, 9-11, 13-15);

means for, when the plurality of transmission rates does not include the at least one transmission rate higher than the particular transmission rate or when the received field strength value at the immediately higher one of the plurality of transmission rates does not exceed the threshold value, continuing the communication with the another wireless communication apparatus at the particular transmission rate (see col. 8, lines 27-35; col. 8, line 52 - col. 9, line 5; col. 9, lines 12-24, 55-61; Figs. 1-2, 9-11, 13-15); and

means for, when the received field strength value at the immediately higher one of the plurality of transmission rates exceeds the threshold value (see col. 8, lines 27-35; col. 8, line 52 - col. 9, line 5; col. 9, lines 55-61; Figs. 1-2, 9-11, 13-15),

(i) determining whether a next higher one of the plurality of transmission rates exists (see col. 8, lines 27-35; col. 8, line 52 - col. 9, line 5; col. 9, lines 12-24, 55-61; Figs. 1-2, 9-11, 13-15),

(ii) when the next higher one of the plurality of transmission rates exists, determining whether the received field strength value at the next higher one of the plurality of transmission rates exceeds the threshold value (see col. 8, lines 27-35; col. 8, line 52 - col. 9, line 5; col. 9, lines 12-24, 55-61; Figs. 1-2, 9-11, 13-15),

(iii) when the received field strength value at the next higher one of the plurality of transmission rates does not exceed the threshold value, continuing communication with the another wireless communication apparatus at an immediately lower one of the plurality of

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transmission rates (see col. 8, lines 27-35; col. 8, line 52 - col. 9, line 5; col. 9, lines 12-24, 55-61; Figs. 1-2, 9-11, 13-15), and

(iv) when the received field strength value at the next higher one of the plurality of transmission rates exceeds the threshold value, repeating (i) through (iv) until the next higher one of the plurality of transmission rates is a highest one of the plurality of transmission rates (see col. 8, lines 27-35; col. 8, line 52 - col. 9, line 5; col. 9, lines 12-24, 55-61; Figs. 1-2, 9-11, 13-15).

Regarding **claims 18 and 30**, Walker discloses a wireless communication apparatus for carrying out wireless communication with another wireless communication apparatus (see col. 7, lines 45-51; Figs. 1-2, 19-20), said apparatus comprising:

means for periodically determining, during communication with the another wireless communication apparatus at a particular one of a plurality of transmission rates associated with a given frequency band, whether a received field strength value at the particular one of the plurality of transmission rates exceeds a threshold value (see col. 8, lines 27-35; col. 8, line 52 - col. 9, line 5; col. 9, lines 12-24, 55-61; Figs. 1-2, 9-11, 13-15);

means for, when the received field strength value at the particular one of the plurality of transmission rates exceeds the threshold value, continuing the communication with the another wireless communication apparatus at the particular one of the plurality of transmission rates (see col. 8, lines 27-35; col. 8, line 52 - col. 9, line 5; col. 9, lines 12-24, 55-61; Figs. 1-2, 9-11, 13-15);

means for, when the received field strength value at the particular one of the plurality of transmission rates does not exceed the threshold value, determining whether the received

field strength value at an immediately lower one of the plurality of transmission rates exceeds the threshold value (see col. 8, lines 27-35; col. 8, line 52 - col. 9, line 5; col. 9, lines 12-24, 55-61; Figs. 1-2, 9-11, 13-15);

means for, when the received field strength value at the immediately lower one of the plurality of transmission rates exceeds the threshold value, continuing the communication with the another wireless communication apparatus at the immediately lower one of the plurality of transmission rates (see col. 8, lines 27-35; col. 8, line 52 - col. 9, line 5; col. 9, lines 12-24, 55-61; Figs. 1-2, 9-11, 13-15); and

means for, when the received field strength value at the immediately lower one of the plurality of transmission rates does not exceed the threshold value,

(i) determining whether a next lower one of the plurality of transmission rates exceeds the threshold value (see col. 8, lines 27-35; col. 8, line 52 - col. 9, line 5; col. 9, lines 12-24, 55-61; Figs. 1-2, 9-11, 13-15),

(ii) when the next lower one of the plurality of transmission rates exceeds the threshold value, continuing the communication with the another wireless communication apparatus at the next lower one of the plurality of transmission rates (see col. 8, lines 27-35; col. 8, line 52 - col. 9, line 5; col. 9, lines 12-24, 55-61; Figs. 1-2, 9-11, 13-15),

(iii) when the next lower one of the plurality of transmission rates does not exceed the threshold value, repeating (i) through (iii) until (i) through (iii) are carried out for a least one of the plurality of transmission rates or until the next lower one of the plurality of transmission rates is a lowest acceptable transmission rate (see col. 8, lines 27-35; col. 8, line 52 - col. 9, line 5; col. 9, lines 12-24, 55-61; Figs. 1-2, 9-11, 13-15), and

(iv) when the next lower one of the plurality of transmission rates a lowest acceptable transmission rate, setting that transmission rate as the maximum transmission rate without determining whether the received field strength value at that transmission rate exceeds the threshold value (see col. 8, lines 27-35; col. 8, line 52 - col. 9, line 5; col. 9, lines 12-24, 55-61; Figs. 1-2, 9-11, 13-15).

Regarding **claims 19 and 31**, Walker discloses an apparatus (see col. 7, lines 45-51; Figs. 1-2, 19-20) according to claim 30, further comprising:

means for, when the received field strength value at the least one of the plurality of transmission rates does not exceed the threshold value, selecting another frequency band, determining whether the another frequency band includes an unused channel in which no disturbing wave is present, when the another frequency band includes the unused channel in which no disturbing wave is present (see col. 8, lines 27-35; col. 8, line 52 - col. 9, line 5; col. 9, lines 12-24, 55-61; Figs. 1-2, 9-11, 13-15),

(i) determining a maximum transmission rate associated with the another frequency band at which the received field strength value exceeds the threshold value (see col. 8, lines 27-35; col. 8, line 52 - col. 9, line 5; col. 9, lines 12-24, 55-61; Figs. 1-2, 9-11, 13-15), and

(ii) continuing communication with the another wireless communication apparatus using the unused channel as the communication channel at the determined maximum transmission rate, and when the another frequency band does not include an unused channel or does not include an unused channel in which no disturbing wave is present or when the another frequency band includes the unused channel in which no disturbing wave is present but there is no transmission rate associated with the another frequency band at which the received field

strength value exceeds the threshold value, continuing communication with the another wireless communication apparatus using the particular channel of the given frequency band as the communication channel at a lowest transmission rate associated with the given frequency band (see col. 8, lines 27-35; col. 8, line 52 - col. 9, line 5; col. 9, lines 12-24, 55-61; Figs. 1-2, 9-11, 13-15).

Regarding **claim 21**, Walker discloses an apparatus according to claim 20, further comprising: means for, when none of the plurality of frequency bands includes an unused channel or when none of the plurality of frequency bands includes an unused channel in which no disturbing wave is present, setting a predetermined channel of a predetermined frequency band as the communication channel, setting a predetermined transmission rate for the communication channel, and then initiating communication with the another wireless communication apparatus using the communication channel at the predetermined transmission rate (see col. 8, lines 27-35; col. 8, line 52 - col. 9, line 5; Figs. 1-2, 9-11, 13-15).

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIE J. DANIEL JR whose telephone number is (571)272-7907. The examiner can normally be reached on 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/W. J. D., Jr./

WJD, Jr  
12 May 2008

/Charles N. Appiah/  
Supervisory Patent Examiner, Art Unit 2617